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Ben G. Almond • Vice President, Regulatory Affairs • phone 202.419.3020 • fax 202.419.3047

April 4, 2003

RECEIVED

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

APR - 4 2003

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

RE: Section 68.4(a) of the Commission's Rules Governing
Hearing Aid Compatibility Telephone
WT Docket No. 01-309 EX PARTE

Dear Ms. Dortch:

On April 3, 2003, representatives of Siemens and Cingular Wireless met in separate meetings with Legal Advisors to discuss issues related to the referenced proceeding.

Two documents were used for discussion purposes, the attached document and the ex parte document previously submitted by Siemens and Cingular Wireless on January 22, 2003. Please associate this notification and accompanying material with the referenced docket proceeding.

The first meeting was held with Barry Ohlson, Legal Advisor for Wireless Issues, Commissioner Jonathan S. Adelstein's office. The meeting was attended by Ross Vincenti of Siemens, Stephen Berger, consultant on behalf of Siemens, Susan Palmer and Ben Almond, both of Cingular Wireless. The second meeting was held with Paul Margie, Spectrum and International, Legal Advisor Commissioner Michael J. Copps' office. This meeting was attended by Mark Esherick of Siemens in addition to the aforementioned representatives of Siemens and Cingular Wireless.

If there are any questions concerning this matter, please contact the undersigned.

Sincerely,

A handwritten signature in black ink that reads 'Ben G. Almond'.

Ben G. Almond
Vice President-Federal Regulatory Affairs

Attachment

Cc: Barry Ohlson
Paul Margie

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List ABCDE



Hearing Aid Compatibility

Testing & Technical Update

Cingular Wireless
Siemens

Ex Parte – WT Docket 01-309

Overview

- **Results of Siemens hearing aid and handset testing**
- **T-Coil and Functional Equivalency**
- **ANSI C63. 19 Background**
- **Cingular/Siemens Earlier Ex Parte Recommendations (Chart)**
 - **Technical Incubator and Steering Committee**
 - **Communication/Education**

Technical Overview

- The Siemens handset *and* hearing aids performed well together
- ANSI C63.19 accurately *predicted* performance
- To achieve our *recommended T-Coil* performance *flexible design* options are needed

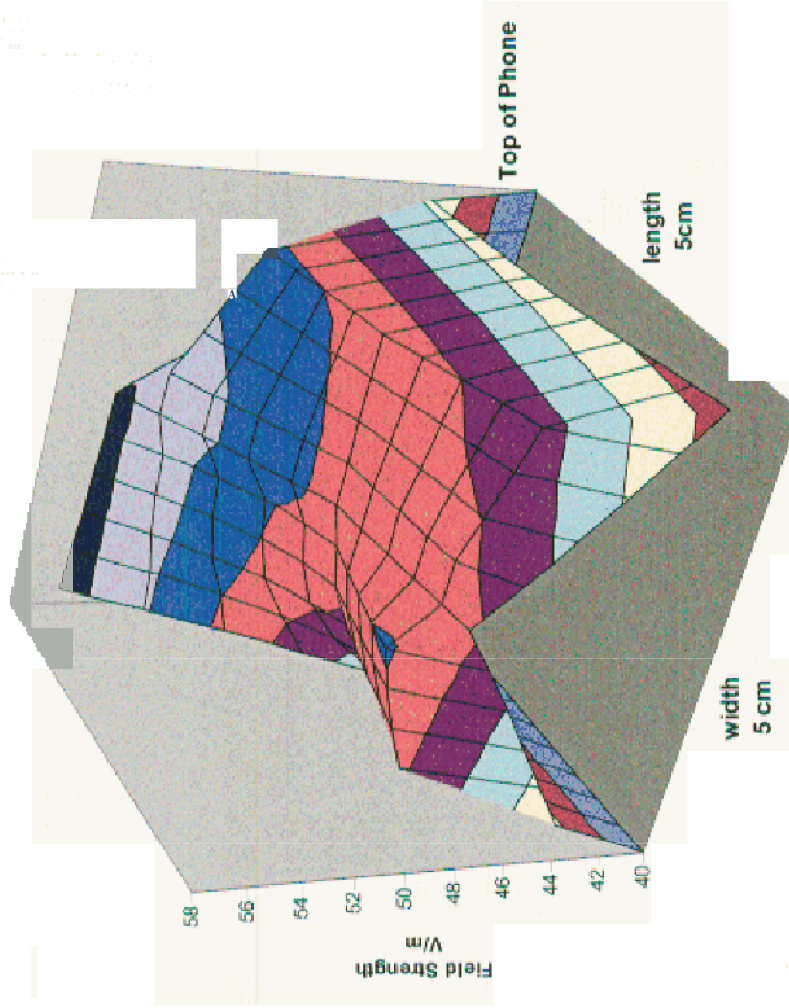


Results of Siemens Testing

- **Siemens handsets were tested and achieved the U3 & U4 category per ANSI C63.19**
- **Siemens Triano S hearing aid also achieved the U4 category for RF immunity**
- **When tested together the Triano S hearing aid had no audible interference near the handsets in microphone mode, but some interference in T-Coil mode.**

Siemens S46 Handset plots – E-Field Plot

Siemens S46



ANSI C63.19 System Classification

System Classification	Articulation Index	U Category Sum
	AI	Sum of Hearing Aid (U Category) + Telephone (U Category)
Usable	0.3	= 4
Normal Use	0.5	= 5
Excellent Performance	0.7	>= 6

•The combination of the U category of the phone and the hearing aid must equal 5 or greater to achieve the recommended performance level.

•*The most appropriate forum to set specific limits is a technical standards committee with both industries represented.*

Next Step User Testing

- Lab testing with hearing aids users is under development with **Gallaudet University**

- Field testing will then be conducted with actual hearing aid users

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a Target Date for Completion: Late Spring

- A report with analysis and summary of the results will be made available and is expected to be useful in developing consumer guidance



Flexible Design Options Should Be Considered

- **T-Coils may not always be the best answer**
 - When given a technical choice inductive loop (T-Coil) systems sell the least even though they are the cheapest
 - Increasing level of electronic saturation in work and public environments make T-Coil use impossible in many locations.
 - Only a small percentage of hearing aid users use T-Coils

Flexible Design Options Should Be Considered

- **Form factors, especially in small phones, impact ability to build in T-coil antenna**
 - A dynamic speaker will produce a T-Coil signal that may pass the current Part 68 level but be too low for many users
 - A more effective solution requires much higher signal levels and so a separate T-Coil antenna and special circuitry
- **Other forms of coupling should be allowed if functionally equivalent**

Solutions should be identified and tested in a Technical Incubator

ANSI C63.19 Questions

Posed by the FCC and others

- **Why conduct testing in analog mode?::**

In early ANSI meetings, 'analog phones appeared to cause changes to the gain in some hearing aids.

*However, similar problems have **not** been noted in recent years.*

*Whether **it** is necessary to continue analog testing should be examined and the standard refined, if needed..*



ANSI C63.19 Questions

Posed by the FCC and others

- **What are issues that can make the results of user testing appear inconsistent with ANSI tests?**

In many cases, user testing is performed without proper controls. Much of the data is anecdotal. The impact of immunity of the user's hearing aid or the transmission level of the phone are not addressed.

ANSI C63.19 Questions

Posed by the FCC and others

- **How can the results of hearing aid and handset testing help consumers?**

When hearing *aids and* handsets are properly matched, consumers, *can be guided to effective solutions with a high degree of confidence.*

Cingular/Siemens Recommendations

- **Technical Focus – unbiased assessment**
- **Technical Incubator with engineers specializing in hearing and wireless technologies that develop and test solutions**
- Independent Steering Committee, not Federal Advisory Committee, to guide efforts**
- **FCC/FDA must actively participate**

Education and Outreach

- In addition to guiding the Technical Incubator, the Steering Committee can address **non-technical issue**
 - Effective use of handsets
 - Determining what **combinations** work can be complex.
 - Support by audiologist and **other** relevant professionals may be required.
- The hearing aid and wireless industry, consumers and hearing health professionals must work together to simplify product selection and provide additional **assistance**.



Summary of Technical Issues

- Testing demonstrated that Siemens hearing aid designs effectively mitigated interference.
- The **ANSI C63.19** standard is effective.
 - Minor variations in user testing can impact apparent outcome.
 - Variables must be monitored carefully to test effectively.
 - The standard should be updated to address the current state of technology.
- Our recommended level of **T-Coil** performance is feasible with an external accessory



A Cooperative and Comprehensive Approach is Needed

- **Cingular/Siemens** believe that both technical and user issues must be addressed
- Both wireless and hearing aid manufacturers must work toward a cooperative **solution-based** approach, endorsed by both the FCC and FDA.

Steps should include:

- An unbiased technical assessment of the issue
- A Technical Incubator with a steering committee with active participation and monitoring by both agencies
- Development of easy and consistent information on product selection and usage